UNITED STATES OF AMERICA

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

NSTAR Electric & Gas Company,	)	
Complainant,	)	
	)	
v.	)	**Docket No. EL01-79-000**
	)	
Sithe Edgar LLC,	)	
Sithe New Boston LLC,	)	
Sithe Framingham LLC,	)	
Sithe West Medway LLC,	)	
Sithe Mystic LLC,	)	
PG&E Energy Trading,	)	
Respondents	)	

Affidavit

Of

Susan F. Tierney

I. INTRODUCTION AND SUMMARY OF TESTIMONY

1. My name is Susan F. Tierney. I am a Senior Vice President at Lexecon Inc., One Mifflin Place, Cambridge, Massachusetts, 02138, where I provide policy, economic and environmental consulting in the energy industry. Lexecon Inc. is an economic and policy consulting firm with offices in Cambridge and in Chicago, Illinois. I have been involved in issues related to utility regulation and policy for 20 years, as a regulator, policymaker, educator, and consultant. Over this period, I have been directly involved in issues that are relevant to this proceeding: economic regulation of utilities, including policies to introduce competition into industries previously characterized by monopoly conditions; power market analysis; wholesale and retail rate and price analysis. I have appeared as an expert witness before the Federal Energy Regulatory Commission ("Commission") and various state regulatory agencies. Prior to joining Lexecon,

I served as the Assistant Secretary for Policy at the U.S. Department of Energy. Before that, I held senior positions in the Massachusetts state government as Secretary of Environmental Affairs; Commissioner of the Department of Public Utilities; Executive Director of the Energy Facilities Siting Council; and Senior Economist for the Executive Office of Energy Resources. Prior to my work in state and federal government, I was an Assistant Professor at the University of California (Irvine). I hold a Ph.D. in regional planning from Cornell University (1980). My resume is attached as Attachment SFT-1.

2. I am testifying in this proceeding on behalf of Sithe Edgar LLC, Sithe New Boston LLC, Sithe Framingham LLC, Sithe West Medway LLC, Sithe Mystic LLC (hereinafter "Sithe"). The purpose of my testimony is to provide information relevant to the matters that are before the Commission in considering the complaint of NSTAR Electric and Gas Corporation ("NSTAR") ("NSTAR Complaint"), which alleges that Sithe possesses market power in a part of the New England Power Pool ("NEPOOL") commonly referred to as the Northeastern Massachusetts Area ("NEMA") and that Sithe's ability to sell power at market-based rates in NEMA during periods of transmission congestion should be terminated or severely curtailed. NSTAR is the parent of Boston Edison Company ("Boston Edison"), from which Sithe purchased its fossil generating assets.

3. My testimony addresses the following issues: (a) historical cost recovery policies and costs for Boston Edison with regard to the fossil generating units now owned by Sithe; (b) Sithe's revenue streams for these generating units; (c) comparison of Boston Edison's and Sithe's cost recovery for the fossil generating units.

4. My overall conclusion is that contrary to allegations in NSTAR's Complaint, Sithe is receiving lower net revenues for its fossil generating units than Boston Edison received for them when it owned them. Prices in the various wholesale electricity markets in New England over the past two years have not provided Sithe with above-market returns for its existing generators. In fact, generation-

related cost recovery (net of fuel expenses) for plants purchased by Sithe was much higher under Boston Edison than under Sithe.

5. On a total net revenue basis, Boston Edison received almost 60 percent more revenues than Sithe over the two-year periods I analyzed (1996-1997 for Boston Edison versus 5/1999-4/2001 for Sithe). On a $ per kW-year basis, Boston Edison received (during the pre-divestiture "cost-based" rate period) nearly 50 percent more than Sithe (during the market-based period, from 5/1999-4/2001). These are the appropriate bases for comparing Sithe's versus Boston Edison's/NSTAR's cost recovery for the fixed costs associated with these generating assets and for evaluating the inaccuracy of NSTAR's allegation that Sithe is presently making "multiples of prior revenues". While Sithe's $/MWH revenues were higher than Boston Edison's, most of the difference is attributable to changes in fuel prices from the 1996-1997 period to the 5/1999-4/2001 period.

6. Boston Edison's rates included full cost recovery for the fixed and variable costs of these plants regardless of their dispatch patterns, while Sithe's revenues mainly only reflect receipt of payments Sithe when the plants operate in merit order or when they are dispatched out of merit order for reliability purposes by the Independent System Operator – New England ("ISO-NE").

II. BOSTON EDISON'S HISTORICAL COST RECOVERY FOR THE FOSSIL GENERATING UNITS NOW OWNED BY SITHE

7. The Massachusetts fossil generating assets (Mystic Station; New Boston Station; West Medway; Framingham; and Edgar Station) now owned by Sithe were previously owned by Boston Edison.

8. Boston Edison is one of the retail electric utility subsidiaries of NSTAR. Prior to the Massachusetts Electric Restructuring Act of 1997 ("Massachusetts Act"), Boston Edison was a vertically integrated electric utility company that owned and operated fossil and other generation, transmission, and distribution assets. Boston Edison provided bundled retail electric service to consumers under rates

regulated by the Massachusetts Department of Public Utilities (“Massachusetts DPU,” now called the Massachusetts Department of Telecommunications and Energy (“Massachusetts DTE”)).

9. Under the Massachusetts DPU's historical rate regulation policies, Boston Edison recovered the costs for its fossil generating units through retail rates that included both base rates and a fuel adjustment charge. Traditionally, base rates were established in rate cases that relied on cost-of-service regulatory principles, which allowed for recovery of non-fuel variable expenses and fixed costs, including a return of and on investment for these generating units, using historical test-year costs. Once a plant's costs were included in base rates, they were recovered in rates charged to consumers until the next time base rates were officially changed by Massachusetts DPU order. Typically, base rates were not adjusted between rate cases to reflect actual operations or dispatch of plants. Fuel-related costs and purchased power expenses were recovered through fully reconciling fuel adjustment clauses. Even though "prior practice of NEPOOL, before restructuring, was to pay for only variable costs when any plants were dispatched for local reliability" (as NSTAR states in its Complaint, page 30), Boston Edison's fixed costs were routinely and consistently recovered from consumers through base rates, instead of through recovery of the net revenues or expenditures associated with NEPOOL dispatch and net interchange.

10. Several changes in retail ratemaking with respect to recovery of generation-related costs have occurred in recent years. First, under the Massachusetts Act, retail rates were unbundled. Boston Edison divested a large percentage but not all of its generating assets; as part of the divestiture process, Boston Edison’s “Fossil Generating Business Unit” (“FGBU”) was sold to Sithe in May 1998. Boston Edison recovers costs associated with plant and other regulatory assets related to the generation function through a transition charge over a 12-year period, beginning with the date that retail access began in Massachusetts (March 1, 1998, known as the "retail access date"). For those customers who take generation service from Boston Edison after the retail access date, Boston Edison

(now part of NSTAR Electric) charges a generation rate approved by the Massachusetts DTE; the difference between costs incurred by Boston Edison/NSTAR to provide such generation service and the revenues collected from consumers are tracked in a deferral account for later recovery. The fuel adjustment charge ceased as of the retail access date.

11. Sithe purchased Boston Edison's FGBU assets for a total price of $674 million (after adjustments were made to the original purchase price of $657 million). (Purchase and Sale Agreement By and Between Boston Edison Company, Seller and Sithe Energies, Inc., Buyer, of December 10, 1997 (hereinafter called "Purchase and Sale Agreement"), Section 2.6-2.7. *Sithe New England Holdings LLC*, 83 FERC ¶ 61,035 (1998).)

12. As part of its divestiture of the FGBU, Boston Edison entered into a cost-based Transition Agreement with Sithe, under which Sithe was obligated to provide and Boston Edison was obligated to take and pay for capacity, energy and ancillary services to Boston Edison from the facilities being sold for a period of at least six months starting in May 1998. (Transition Agreement between Sithe Energies, Inc. and Boston Edison Company for the Purchased Facilities (hereinafter, "Transition Agreement"), Articles 2 and 4. *Sithe New England Holdings LLC*, 83 FERC ¶ 61,035 (1998)).

13. Since divesting its fossil generating assets in 1998 (and subsequently, one of its nuclear generating assets, Pilgrim Station, in July 1999), Boston Edison still provides service to retail customers who do not take power from a competitive supplier. At any point in time, the resources Boston Edison procures to provide generation service to retail customers ("Standard Offer" and "Default Service" customers) come from various sources of supply, including the resources from plants still owned by Boston Edison, existing long-term power purchase agreements Boston Edison entered into prior to the retail access date, new power purchase agreements NSTAR has entered into with other wholesale suppliers to provide service to Standard Offer and Default Service customers, and spot markets. According to NSTAR's Annual Report for 2000, "long-term contracts will

supply approximately 90%-95% of its standard offer service obligations. NSTAR Electric entered into power purchase agreements to meet all of its default service supply obligation for the period January through June 2001. NSTAR Electric expects to continue periodic market solicitations for default service power supply consistent with provisions of the Restructuring Act and [Massachusetts] DTE orders." (NSTAR 2000 Annual Report, page 17.)

III. BOSTON EDISON'S HISTORICAL LEVEL OF COST RECOVERY FOR THE FOSSIL GENERATING ASSETS NOW OWNED BY SITHE

14. There are two relevant time periods for examining the level of Boston Edison's recent cost recovery for the fossil generating assets now owned by Sithe: first, the time period immediately preceding Boston Edison's sale of the FGBU to Sithe; and second, the 6-month time period following Boston Edison's divestiture of the FGBU to Sithe, a period during which Boston Edison purchased energy, capacity and ancillary services from these generating units under the cost-based Transition Agreement with Sithe.

15. In the full two-year time period immediately preceding divestiture of the FGBU, Boston Edison's revenue requirements for its fossil generating are shown in Attachment SFT-2. Boston Edison's 1996-1997 average net revenue requirement related to its fossil generating units was $78.93 per kilowatt-year, excluding fuel and other variable costs. Including fuel and other variable costs, these costs were $61.52/MWH, based on actual MWH output of these plants in those years. Total ratepayer contribution towards fixed cost recovery was $346 million paid to Boston Edison over the 1996-1997 period. These costs are generally consistent with those that were reflected in base rates and fuel charges collected from consumers.

16. The source for these historical pre-divestiture revenue requirement figures in Attachment SFT-2 are Boston Edison’s FERC Form 1 data for 1996-1997; and 1996 costs for Boston Edison’s FGBU assets as shown in Exhibits A and B of the

Transition Agreement. Data for the two years were averaged to derive annual results on a per-kilowatt and per-megawatt hour basis. Kilowatts of capacity and megawatt hours of generation output were taken from Boston Edison's 1996 and 1997 FERC FORM 1 filings. Capital costs include return on capital as well as depreciation expenses. Depreciation figures are taken from FERC Form 1 accounts for Production-Steam and Production-Other. Return on capital is calculated based on net production plant-in-service (Steam Plant and Other Plant, less accumulated depreciation) multiplied by rate of return (which I based on Boston Edison's net income over its net utility plant in service). Finally, capital costs are reduced by 1.4 percent to exclude Wyman 4 (which represents 1.4 percent of Boston Edison's fossil units on an original cost basis (Exhibit A to the Purchase and Sale Agreement). Other fixed costs for 1996 are taken from Exhibits A and B of the Purchase and Sale Agreement. For 1997, I calculated other fixed costs from Boston Edison's 1997 FERC Form 1 and using the same methodology as applied in Exhibit B of the Transition Agreement. I assumed that property taxes for 1997 would be the same as for 1996. Total operations and maintenance ("O&M") costs are taken from Boston Edison's 1996 and 1997 FERC Form 1 filings for all fossil units except Wyman Station. Variable O&M costs are calculated using cost factors of $3.60 and $10 per megawatt hour of output from steam and other plants, respectively. I calculated fixed O&M costs as the difference between total O&M and variable O&M costs.

17. In the 6-month time period immediately following divestiture of the FGBU, Boston Edison's costs for purchasing power from Sithe under the terms of the cost-based Transition Agreement were $107.95 per kilowatt-year, excluding fuel and variable O&M costs. (See Attachment SFT-3.) Including fuel and variable O&M costs, these post-divestiture costs were $51.09/MWH, based on actual MWH output of these plants in those years. These costs are reflected in the payments Boston Edison made to Sithe under the terms of the "cost-based" Transition Agreement. (See Boston Edison July 1997 Informational Filing on its Divestiture Plan (cover letter dated July 9, 1997, from William S. Stowe to the Department of Public

Utilities, Docket 96-23 (hereafter “Boston Edison's July 1997 Informational Filing”), Pages 4-6, 4-8).

18. To estimate unit cost factors for these units during the period the Transition Agreement was in effect, I combined data reported in Boston Edison's FERC Form 1 for 1998 with respect to its payments to Sithe, along with the amount of energy delivered under the Transition Agreement. These costs were separated into fixed and variable fuel and O&M costs and the unit cost factors were calculated using similar assumptions about variable fuel and O&M costs and capacity as were used in calculating the results for the pre- and post-transition period revenues.

19. During the period prior to divestiture, Boston Edison recovered both fixed and variable costs for its fossil generating units in cost-based rates. During the 6-month Transition Contract immediately following divestiture, Boston Edison paid Sithe for energy, capacity and ancillary services from these plants based on a cost-based contract.[1] These cost-based amounts (for revenues net of variable costs) were $78.93/kw-year during the pre-divestiture period (1996-1997) and $107.95/kw-year during the 6 months following divestiture (1998).

IV. MARKET-BASED REVENUE STREAMS FOR SITHE'S FOSSIL GENERATING UNITS

20. Since buying the Boston Edison FGBU in May 1998, Sithe has been participating in the New England security-constrained economic dispatch administered by the ISO-NE. Since the opening of the spot market for energy on May 1, 1999, Sithe has been submitting bids to supply energy and ancillary services, as described in further detail in the Affidavit of Chris Fleming. Some of Sithe's energy and capacity are sold under bilateral agreements, with the residual being available for the markets administered by the ISO-NE.

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[1] In describing its proposed divestiture plan in July 1997, Boston Edison indicated its intention to sign a transition purchase power contract to maintain the operations and availability of the generating assets in the same condition/situation as they were prior to divestiture: "The Company will enter into transition contracts with buyer(s) for specified capacity and energy at prices which will be governed by a *cost-based* rate.... " (Emphasis added).... (Boston Edison July 1997 Informational Filing on its Divestiture Plan, Page 4-6)

21. To examine whether Sithe has been receiving revenues substantially in excess of its costs, I calculated the value of Sithe's sales of energy along with payments for ancillary services, capacity and uplift that Sithe received during the two-year period since the markets opened in May 1999.

22. Attachment SFT-4 (CONFIDENTIAL) shows the results of my analysis. This shows that during the 5/1999 to 4/2000 period, Sithe would have had a net revenue requirement of $53.04 per kilowatt-year (net of fuel and variable O&M costs). Including fuel and variable O&M costs, the amount would be $77.72/MWH. Sithe received $220 million in contribution towards fixed cost recovery over this two-year period. This is well below full fixed cost recovery for Sithe, even without including the acquisition premium paid in the purchase of Boston Edison's assets.

23. This calculation includes revenues from all significant revenue sources earned by Sithe in the two years (5-1-99 to 4-31-01) since the opening of the NEPOOL spot markets in 5/1/99. These revenue sources included: the energy and ancillary service markets, uplift, as well as payments for Installed Capacity ("ICAP").

24. For the energy markets, I obtained actual energy output for each of Sithe's units over the period. For steam units, I calculated Sithe's variable costs using output-specific heat rate data for each unit[2] and publicly available spot fuel prices (obtained from Platt's fuel price data for Boston area) for the relevant fuels. Consistent with my other analyses and using the same O&M assumptions as Sithe uses, I added a standard $3.60 per MWH variable O&M to the cost of producing energy. For Sithe's combustion turbine units, I used average heat rates and assumed variable O&M equal to $10 per MWH.

25. To calculate Sithe's net revenues from sales of electric energy, I subtracted certain variable production costs (fuel plus variable O&M) from hourly energy

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[2] I was unable to obtain hourly output for Sithe's 36 MW interest at Wyman. Thus, the impact of this unit of average energy revenues and costs are not included in my analyses.

revenues, valuing all energy produced by Sithe as if it had been sold into the energy spot market administered by ISO-NE. (To the extent that Sithe sold energy bilaterally during this period, the revenues from these sales are captured using spot energy prices. Sithe's actual energy market revenues may be higher or lower, depending upon its performance in the bilateral market.) The total net revenue figures (whether positive of negative) for each hour were then summed for the two years and divided by two to produce net energy revenue per year available to Sithe to cover fixed costs. (Attachment SFT-4 (Confidential), page 2 of 2, shows the high percentage of time during which Sithe's revenues in the energy market were be negative relative to its variable fuel and O&M costs.) This number was divided by the nameplate capacity of Sithe units to produce a $ per kW-year result.

26. I used Sithe's actual revenue data with respect to revenues from the following: ancillary services (reserve and automatic generation control); ICAP; and energy- and transmission-related uplift.

27. Finally, total revenue in each other category was divided by two and then by total amount of capacity to produce $ per kW-year contributions. I summed each revenue component to produce the total $ per kW-year result presented in Attachment SFT-4 (CONFIDENTIAL). For the $ per megawatt-hour figure, I summed the revenue components and divided by megawatt-hour output, as reported to me by Sithe.

28. My calculation shows that in contrast to assertions by NSTAR in its Complaint (page 27) that “96 percent of actual congestion costs would have been avoided” had Sithe bid its actual marginal costs, most of the revenue Sithe receives in the form of uplift is actually needed to cover energy market "losses" (i.e., negative revenues in hours when the ISO-NE dispatches Sithe for transmission congestion and other reliability purposes at times when Sithe would suffer an out-of-pocket

loss if it were paid only the energy clearing price[3]). My analysis reveals that Sithe would have experienced energy market losses in over 75 percent of the hours in which its steam units operated. (In 17 of 24 months Sithe actually spent more to produce energy - on a variable basis - than it receives from the hourly market when paid at the energy clearing price.) The other remaining uplift revenues are likely the result of the ISO-NE's bid requirements, Sithe's operational requirements, and variable operating costs not included in my analysis, as described further in Mr. Fleming's affidavit.

29. Without more information on NSTAR's own cost calculation, it is difficult to explain how NSTAR obtained such a faulty conclusion. Two possible explanations may be (a) a failure to take into account the relatively high operating costs experienced by Sithe's units when operating at low loads and (b) a failure to account for the minimum run times of units.[4]

30. As described above, my calculation of the $ per kW-year and $ per MWH revenues earned by Sithe over the two-year history of the markets is built in large part from actual revenues and detailed information on Sithe's operations. There are a number of reasons to believe, however, that they may overestimate the net revenues earned by Sithe.

31. First, I assumed that Sithe received $6,000 per MWH for power that it produced for the four hours that spot prices hit that level on May 8, 2000. To the extent Sithe sold power bilaterally on that date, its revenues would have been much less. In addition, these prices are the subject of an ongoing FERC case and may be revised downward. Second, I also assumed that Sithe receives some ICAP revenues for its sales through the ISO-NE-administered auction for June through July of 2000. These revenues are also the subject of an ongoing FERC case and may not be realized. Third, I have not made any adjustments for inflation.

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[3] My calculation of "losses" takes into account direct variable fuel and O&M costs. These losses would be higher if other operating costs, such as emissions allowances, wear and tear and allowable fuel transportation costs were included. See Affidavit of Chris Fleming.

[4] My understanding is that the minimum run times for Sithe's units have either remained constant or actually decreased since the time they were owned by Boston Edison.

Revenues earned by Sithe in 1999 to 2001 have less real value than those earned previously by Boston Edison under regulation. Fourth, I have not accounted for emission allowances in the variable costs of producing power. This is a true variable cost of production that I have not netted from Sithe's revenues. In his affidavit, Mr. Fleming indicates that he values emissions allowances at $2.50/MWH, based on the emissions trading values for May 2000. Inclusion of this amount would add to the variable fuel and O&M cost calculation I used to reflect Sithe's operating costs. Fifth, I understand that Sithe has experienced large transportation gas costs inherited from Boston Edison and associated with using gas at its New Boston facility. These costs are not treated as variable or taken into account in my analysis. Sixth, I have not included any one-time costs associated with each start-up of the generating units. Finally, I understand that Sithe has experienced increased problems with boiler tube failure that may be a result of increased ramping ("chatter") in ISO-NE dispatch instructions. Such problems may have led me to significantly underestimate the variable cost of producing power, particularly in the later period of my analysis. These variable cost-related factors are discussed in Mr. Fleming's affidavit.

32. Particularly when these factors are taken into account, the uplift paid to Sithe has not resulted in significant - if any - revenues above its direct costs of producing power. To the extent that any such revenues are realized, they would be a relatively small fraction of Sithe's operating costs and would be unlikely to value fully either the added cost of producing power in the NEMA area (e.g., higher property taxes) or the added reliability afforded to the NEPOOL system. As explained in Dr. Hieronymus' affidavit, NEPOOL's Market Rule 17 allows for units that are seldom run except under constrained conditions to recover their fixed costs while running out of economic merit order.

33. These results contradict NSTAR's claim in its Complaint that "[I]n the instant case, there is no reason to believe that Sithe is not making the same multiples of prior revenues as the rest of the generation community. Hence, it is highly unlikely that Sithe will receive revenue below its out-of-pocket cost of operating

generation facilities in NEMA even if it is required to operate New Boston a [sic] purely on short-run variable cost basis." (NSTAR Complaint, page 31.)

V COMPARISON OF BOSTON EDISON'S AND SITHE'S COST RECOVERY FOR THE FOSSIL GENERATING UNITS

34. To shed light on NSTAR's claims that Sithe is receiving excessive revenues, I compared: (a) the revenue requirement collected by Boston Edison for the fossil generating units during the two full years prior to divestiture, with (b) the costs of the plants during the Transition Agreement period in which Sithe sold energy, capacity and ancillary services to Boston Edison under a cost-based contract rate, and (c) the net revenues that Sithe has received from the energy, ICAP and ancillary service markets, and from uplift during the two-year period starting May 1999. In making this assessment, I compared these costs using both a $/kW-yr measure (to reflect only fixed cost recovery, net of variable fuel and O&M costs) and $/MWH (using total revenues, without netting out fuel or variable O&M costs). The results of my comparison are shown below in Table 1.

Table 1

Comparison of Cost Recovery for Fossil Generating Assets:
Boston Edison v. Sithe

Time period analyzed	Basis for cost recovery	Cost recovery in average $/kW-year	Cost recovery in average $/MWH	Total net revenues (excluding variable costs) – 2 years
Boston Edison (NSTAR) ownership (1996-1997)	Cost-based base rates and fuel clause	$78.93	$61.52	$ 346 million
Sithe Transition Contract - Sithe ownership (5/98-11/98)	Cost-based contract	$107.95	$51.09	---
Sithe ownership (5/1999-4/2001)	Market-based rates	$53.04	$77.72	$220 million

35. As shown above, Sithe's market-based revenues in the past two years – whether calculated on the basis of total net revenues and $/kw-year – are much lower than those enjoyed by Boston Edison during the two years prior to divestiture. On a total net revenue basis, Boston Edison received 57 percent more revenues than Sithe. On a $ per kW-year basis, Boston Edison received (during the pre-divestiture "cost-based" rate period) 49 percent more than Sithe (during the market-based period, from 5/1999-4/2001). These are the appropriate bases for comparing Sithe's versus Boston Edison's/NSTAR's cost recovery for the fixed costs associated with these generating assets and for evaluating the inaccuracy of NSTAR's allegation that Sithe is presently making "multiples of prior revenues".

36. The figures for cost recovery on a simple $/MWH basis inappropriately suggest that Sithe's revenues are higher than those previously enjoyed by Boston Edison, since these revenues are distorted by various influences: For example, most of the change in $/MWH between Boston Edison's cost recovery (1996-1997) and Sithe's market-based cost recovery (5/1999-4/2001) results from changes in fuel prices. Direct and indirect fuel costs during the most recent two year period (5/1999-4/2001) were 35 percent higher than they were in 1996-1997; since the $/MWH figures include fuel prices, these higher fuel costs contribute to the higher $/MWH in the recent period. Additionally, generation output at the fossil

generating units analyzed here was 50 percent higher during 1996-1997 when Boston Edison owned the plants than during the past two-year period under Sithe's ownership. (There were significant nuclear outages during this period, causing certain fossil generation, like the Boston Edison generating units, to operate at higher capacity factors than they would when the nuclear plants are operating.) This fact of higher plant output during 1996-1997 causes Boston Edison's higher absolute dollar amount of revenue recovered for fixed costs to be spread across more megawatt hours of output, thus lowering the $ per megawatt hour. Additionally, as described by Mr. Fleming in his affidavit, there are relatively high variable operating costs associated with current ISO-NE operating practices, which cause Sithe's plants to be operated frequently at their relatively inefficient, low operating levels. This fact tends to increase the $/MWH figure for Sithe.

37. In conclusion, these figures strongly counter NSTAR's contention that whatever market power Sithe might have is not adequately mitigated under Market Rule 17 or that the actual revenues received by Sithe fall outside "the zone of reasonableness" used as a basis for market based rate authority.

38. Both the revenue requirement experienced under Boston Edison as a regulated supplier and the cost-based rates that NSTAR agreed to pay Sithe under the Transition Agreement strongly suggest that the revenues received by Sithe, which are lower than both of the other revenue requirements, are “reasonable.” If anything, one could conclude that market mitigation is cutting Sithe’s revenues too severely, keeping them below the level of payment appropriate for resources badly needed to serve a load pocket reliably.

V. CONCLUSION

39. My analysis contradicts the unfounded assertion in the NSTAR Complaint that its customers are paying excessive costs in New England's spot markets as a result of Sithe's alleged abuse of market power in NEMA.

40. In fact, generation-related revenue requirements for the fossil generating units were higher under Boston Edison than under Sithe (whether on a total net revenues or a $/kW-year basis). Boston Edison's rates included cost recovery for the fixed and variable costs of New Boston and Mystic Stations, while Sithe's revenues only reflect payments to Sithe when the plants operate in merit order or when they are dispatched out of merit order for reliability purposes by the ISO-NE and only receives contribution toward fixed costs through (a) ICAP-related payments and (b) spot market revenues in the hours when the plant is operating in merit order and is infra-marginal.

41. Using a $/MWH basis for comparing cost recovery for Boston Edison with Sithe's cost recovery distorts the picture of the actual of fixed-cost recovery experienced by these companies, because this metric is affected by changes in fuel costs, and low-efficiencies associated with ISO-NE dispatch policies. Looking at cost recovery of non-variable costs alone, Boston Edison received $346 million annually during 1996-1997, while Sithe received $220 million during the 5/1999-4/2001 period. Boston Edison obtained these revenues from its own customers, while uplift paid to Sithe is supported by all customers in New England.

42. I conclude that NSTAR's allegation that Sithe is receiving "multiples..." of revenues paid in the past for these assets is not supported by the evidence.

List of Attachments

Attachment SFT-1	Resume of Susan Tierney
Attachment SFT-2	Boston Edison Fossil Generation Cost Recovery Summary (1996-1997)
Attachment SFT-3	Transition Agreement Fossil Generation Cost Recovery Summary (5/98 - 11/98)
Attachment SFT-4 (CONFIDENTIAL)	Sithe New England Fossil Generation Cost Recovery Summary (5/99 - 4/01), and Sithe Energy Market Losses In Hours When Dispatched Units' Variable Costs Exceed Energy Clearing Price

BOSTON EDISON FOSSIL GENERATION [1]
COST RECOVERY SUMMARY (1996 - 1997)

L#		1996	1997	Average ($/yr)	Contribution Toward Fixed Costs ($/kW-yr)[2]	Average ($/MWH)[3]	Source
1	Taxes, G&A	$47,138,000	$44,136,610	$45,637,305	$22.34	$7.29	FERC Form 1[4]; Transition Agreement[5]
2	Fixed O&M	$31,001,377	$13,319,857	$22,160,617	$10.85	$3.54	FERC Form 1
3	Capital	$94,697,666	$92,121,674	$93,409,670	$45.73	$14.92	FERC Form 1
4	**Fixed Generation Costs**	**$172,837,043**	**$149,578,140**	**$161,207,592**	**$78.93**	**$25.76**	Sum of Lines 1 - 3
5	Variable O&M[6]	$18,719,365	$26,461,069	$22,590,217		$3.61	FERC Form 1
6	Fuel	$176,225,744	$226,303,103	$201,264,424		$32.16	FERC Form 1
7	**Variable Generation Costs**	**$194,945,109**	**$252,764,172**	**$223,854,641**		**$35.77**	Line 5 + Line 6
8	**Total Generation Costs**	**$367,782,152**	**$402,342,313**	**$385,062,232**		**$61.52**	Line 4 + Line 7

Notes:
1 - Does not include Boston Edison's portion of W. F. Wyman 4.
2 - Uses nameplate kW capacity from FERC Form 1 (2,042,500 excluding W. F. Wyman 4).
3 - Uses average of 1996 and 1997 MWH plant output from FERC Form 1 (6,258,827 excluding W. F. Wyman 4).
4 - Boston Edison's FERC Form 1.
5 - Transition Agreement between Sithe Energies, Inc. and Boston Edison for the Purchased Facilities (December 10, 1997).
6 - Includes variable O&M equal to $3.60/MWH for steam units, $10.00/MWH for combustion turbines.

BOSTON EDISON FOSSIL GENERATION [1]
COST RECOVERY SUMMARY (1996 - 1997)

L#		1996	1997	Average ($/yr)	Contribution Toward Fixed Costs ($/kW-yr)[2]	Average ($/MWH)[3]	Source
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5	Variable O&M[6]	$18,719,365	$26,461,069	$22,590,217		$3.61	FERC Form 1
6	Fuel	$176,225,744	$226,303,103	$201,264,424		$32.16	FERC Form 1
7	**Variable Generation Costs**	**$194,945,109**	**$252,764,172**	**$223,854,641**		**$35.77**	Line 5 + Line 6
8	**Total Generation Costs**	**$367,782,152**	**$402,342,313**	**$385,062,232**		**$61.52**	Line 4 + Line 7

Notes:
1 - Does not include Boston Edison's portion of W. F. Wyman 4.
2 - Uses nameplate kW capacity from FERC Form 1 (2,042,500 excluding W. F. Wyman 4).
3 - Uses average of 1996 and 1997 MWH plant output from FERC Form 1 (6,258,827 excluding W. F. Wyman 4).
4 - Boston Edison's FERC Form 1.
5 - Transition Agreement between Sithe Energies, Inc. and Boston Edison for the Purchased Facilities (December 10, 1997).
6 - Includes variable O&M equal to $3.60/MWH for steam units, $10.00/MWH for combustion turbines.

TRANSITION AGREEMENT FOSSIL GENERATION COST RECOVERY SUMMARY [1] (5/98 - 11/98)

L#		Total Expenditures ($ - 6 months)	Nominal Capacity (MW)*	Contribution Toward Fixed Costs[2] ($/kW-yr)	Generation[3] (MWH)*	Average ($/MWH)
1	**Capacity Payment**	71,284,500	2,080	$68.54	4,777,341	$14.92
	O&M					
2	**Assumed Fixed**	40,982,547	2,080	$39.41	4,777,341	$8.58
3	**Assumed Variable** [4]	17,230,428	N/A	N/A	4,777,341	$3.61
4	**Energy Charges**	114,572,154			4,777,341	$23.98
5	**Total**	244,069,629				$51.09
6	**Total Fixed (1+2)**	112,267,047	2,080	$107.95	4,777,341	$23.50
7	**Total Variable (3+4)**	131,802,582	N/A	N/A	4,777,341	$27.59
8	**Total**	244,069,629				$51.09

Notes:
1 - Charges and MWH under Transition Agreement from 1998 Boston Edison FERC Form 1.
2 - 6-month expenditures are multiplied times 2 to calculate $/kW-yr.
3 - Assumes 5,000 MWH from combustion turbines, based on 6,241 MWH for 1998.
4 - Includes variable O&M equal to $3.60/MWH for steam units, $10.00/MWH for combustion turbines.

* Includes Sithe's 37.24 MW portion of W. F. Wyman 4 in both the capacity and generation output figures since these are included in Boston Edison's FERC Form 1 data. Wyman represents less than 1.8 % of total Fossil generating capacity in this analysis.